

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

| | | |
|---|---|---------------------|
| AVAGO TECHNOLOGIES U.S. INC., |) | |
| AVAGO TECHNOLOGIES ECBU IP (SINGAPORE) |) | |
| PTE. LTD., AND AVAGO TECHNOLOGIES GENERAL |) | |
| IP (SINGAPORE) PTE. LTD., |) | C.A. No. 11-071-SLR |
| |) | |
| Plaintiffs, |) | |
| |) | |
| v. |) | JURY TRIAL DEMANDED |
| |) | |
| CYPRESS SEMICONDUCTOR CORPORATION, AND |) | |
| CYPRESS SEMICONDUCTOR (MINNESOTA) INC., |) | |
| |) | |
| Defendants. |) | |

**AVAGO'S ANSWER TO CYPRESS'S COUNTERCLAIMS TO
PLAINTIFFS' FIRST AMENDED COMPLAINT**

Plaintiffs/Counter-Defendants Avago Technologies U.S. Inc., Avago Technologies ECBU IP (Singapore) Pte. Ltd., and Avago Technologies General IP (Singapore) Pte. Ltd. (collectively, "Avago") file this Answer to the Counterclaims filed by Defendants/Counter-Plaintiffs Cypress Semiconductor Corporation and Cypress Semiconductor (Minnesota) Inc. (collectively "Cypress"), and state as follows:

1-65. Paragraphs 1-65 constitute Cypress's Answer to Avago's Complaint for Patent Infringement and, therefore, no response is required.

CYPRESS'S COUNTERCLAIMS

THE PARTIES

66. Avago is without sufficient knowledge or information to form a belief as to the truth of the allegations in Paragraph 66 and, therefore, denies each of these allegations.

67. Avago is without sufficient knowledge or information to form a belief as to the truth of the allegations in Paragraph 67 and, therefore, denies each of these allegations.

68-70. Admitted.

JURISDICTION AND VENUE

71. Avago admits that Cypress has served Counterclaims seeking declaratory judgment of non-infringement and invalidity of Avago's U.S. Patent Nos. 6,172,354, 6,797,937, 7,189,985, 7,791,590, and 7,808,485, and alleging that Avago has infringed U.S. Patent Nos. 5,877,656, 6,255,180, 6,309,971, 6,627,547, and 6,784,552¹ (collectively, "the Asserted Cypress Patents"). Avago denies Cypress's Counterclaims, but admits that this Court has subject matter jurisdiction over them.

72-73. Admitted.

GENERAL ALLEGATIONS

74. Avago admits that Cypress makes, sells, and offers for sale the Programmable-System-on-Chip and optical and imaging sensors that are the subject of Avago's Complaint for Patent Infringement. Avago is without sufficient knowledge or information to form a belief as to

¹ Individual patents are subsequently referred to herein by the last three digits of the patent number. Thus, U.S. Patent No. 6,172,354 is subsequently referred to as "the '354 patent," U.S. Patent No. 7,189,985 is referred to as "the '985 patent," etc.

the truth of the remaining allegations in Paragraph 74 and, therefore, denies each of these allegations.

75. Avago admits that it is a provider of analog, mixed-signal and optoelectronic components and subsystems, including navigational interface devices and optical sensors.

76. Avago admits that, on January 21, 2011, Avago filed its Original Complaint against Cypress, asserting infringement of the '354, '985 and '590 patents, and that, on September 9, 2011, Avago filed its First Amended Complaint against Cypress, asserting infringement of the '354, '985, '590, '937 and '485 patents. Avago acknowledges that Cypress denies infringement and reaffirms its allegations that Cypress infringes each of the above asserted patents.

FIRST CLAIM FOR RELIEF

(Infringement of the '354 patent)

77. Avago incorporates by reference Paragraphs 66-76 of this Answer to Counterclaims as if fully set forth herein.

78. Admitted.

79. Denied.

SECOND CLAIM FOR RELIEF

(Infringement of the '985 patent)

80. Avago incorporates by reference Paragraphs 66-79 of this Answer to Counterclaims as if fully set forth herein.

81. Admitted.

82. Denied.

THIRD CLAIM FOR RELIEF

(Infringement of the '590 patent)

83. Avago incorporates by reference Paragraphs 66-82 of this Answer to Counterclaims as if fully set forth herein.

84. Admitted.

85. Denied.

FOURTH CLAIM FOR RELIEF

(Infringement of the '937 patent)

86. Avago incorporates by reference Paragraphs 66-85 of this Answer to Counterclaims as if fully set forth herein.

87. Admitted.

88. Denied.

FIFTH CLAIM FOR RELIEF

(Infringement of the '485 patent)

89. Avago incorporates by reference Paragraphs 66-88 of this Answer to Counterclaims as if fully set forth herein.

90. Admitted.

91. Denied.

SIXTH CLAIM FOR RELIEF

(Validity of the '354 patent)

92. Avago incorporates by reference Paragraphs 66-91 of this Answer to Counterclaims as if fully set forth herein.

93. Admitted.

94. Denied.

SEVENTH CLAIM FOR RELIEF

(Validity of the '985 patent)

95. Avago incorporates by reference Paragraphs 66-94 of this Answer to Counterclaims as if fully set forth herein.

96. Admitted.

97. Denied.

EIGHTH CLAIM FOR RELIEF

(Validity of the '590 patent)

98. Avago incorporates by reference Paragraphs 66-97 of this Answer to Counterclaims as if fully set forth herein.

99. Admitted.

100. Denied.

NINTH CLAIM FOR RELIEF

(Validity of the '937 patent)

101. Avago incorporates by reference Paragraphs 66-100 of this Answer to Counterclaims as if fully set forth herein.

102. Admitted.

103. Denied.

TENTH CLAIM FOR RELIEF

(Validity of the '485 patent)

104. Avago incorporates by reference Paragraphs 66-103 of this Answer to Counterclaims as if fully set forth herein.

105. Admitted.

106. Denied.

ELEVENTH CLAIM FOR RELIEF
(Alleged Infringement of the '180 patent)

107. Avago incorporates by reference Paragraphs 66-106 of this Answer to Counterclaims as if fully set forth herein.

108. Avago admits that Exhibit A to Cypress's Counterclaims purports to be a copy of the '180 patent, issued July 3, 2001, and entitled "Semiconductor Device With Outwardly Tapered Sidewall Spacers And Method For Forming Same." Avago denies that the '180 patent was duly and legally issued to Cypress. Avago is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations in Paragraph 108 and, therefore, denies each of these allegations.

109. Avago acknowledges that Cypress has not provided Avago with an expressed, written license under the '180 patent. Avago is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations in Paragraph 109 and, therefore, denies each of these allegations.

110-116. Denied.

TWELFTH CLAIM FOR RELIEF
(Alleged Infringement of the '552 patent)

117. Avago incorporates by reference Paragraphs 66-116 of this Answer to Counterclaims as if fully set forth herein.

118. Avago admits that Exhibit B to Cypress's Counterclaims purports to be a copy of the '552 patent, issued August 31, 2004, and entitled "Structure Having Reduced Lateral Spacer Erosion." Avago denies that the '552 patent was duly and legally issued to Cypress. Avago is

without sufficient knowledge or information to form a belief as to the truth of the remaining allegations in Paragraph 118 and, therefore, denies each of these allegations.

119. Avago acknowledges that Cypress has not provided Avago with an expressed, written license under the '552 patent. Avago is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations in Paragraph 119 and, therefore, denies each of these allegations.

120-125. Denied.

THIRTEENTH CLAIM FOR RELIEF
(Alleged Infringement of the '971 patent)

126. Avago incorporates by reference Paragraphs 66-125 of this Answer to Counterclaims as if fully set forth herein.

127. Avago admits that Exhibit C to Cypress's Counterclaims purports to be a copy of the '971 patent, issued October 30, 2001, and entitled "Hot Metallization Process." Avago denies that the '971 patent was duly and legally issued to Cypress. Avago is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations in Paragraph 127 and, therefore, denies each of these allegations.

128. Avago acknowledges that Cypress has not provided Avago with an expressed, written license under the '971 patent. Avago is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations in Paragraph 128 and, therefore, denies each of these allegations.

129-134. Denied.

FOURTEENTH CLAIM FOR RELIEF
(Alleged Infringement of the '547 patent)

135. Avago incorporates by reference Paragraphs 66-134 of this Answer to Counterclaims as if fully set forth herein.

136. Avago admits that Exhibit D to Cypress's Counterclaims purports to be a copy of the '547 patent, issued September 30, 2003, and entitled "Hot Metallization Process." Avago denies that the '547 patent was duly and legally issued to Cypress. Avago is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations in Paragraph 136 and, therefore, denies each of these allegations.

137. Avago acknowledges that Cypress has not provided Avago with an expressed, written license under the '547 patent. Avago is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations in Paragraph 137 and, therefore, denies each of these allegations.

138-143. Denied.

FIFTEENTH CLAIM FOR RELIEF
(Alleged Infringement of the '656 patent)

144. Avago incorporates by reference Paragraphs 66-143 of this Answer to Counterclaims as if fully set forth herein.

145. Avago admits that Exhibit D to Cypress's Counterclaims purports to be a copy of the '656 patent, issued March 2, 1999, and entitled "Programmable Clock Generator." Avago denies that the '656 patent was duly and legally issued to Cypress. Avago is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations in Paragraph 145 and, therefore, denies each of these allegations.

146. Avago acknowledges that Cypress has not provided Avago with an expressed, written license under the '656 patent. Avago is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations in Paragraph 146 and, therefore, denies each of these allegations.

147-152. Denied.

AFFIRMATIVE DEFENSES

Avago alleges and asserts the following defenses in response to the allegations by Cypress, undertaking the burden of proof only as to those defenses deemed affirmative defenses by law, regardless of how such defenses are denominated herein.

FIRST AFFIRMATIVE DEFENSE

(Invalidity of the Asserted Cypress Patents)

1. The Asserted Cypress Patents are invalid, in whole or in part, for failing to comply with the Patent Laws of the United States including, but not limited to 35 U.S.C. §§ 101, 102, 103 and/or 112.

SECOND AFFIRMATIVE DEFENSE

(Noninfringement of the Asserted Cypress Patents)

2. On information and belief, Avago has not directly infringed any valid and enforceable claim of the Asserted Cypress Patents, either literally or under the doctrine of equivalents.

3. On information and belief, Avago has not actively induced infringement, or contributed to the infringement of any valid and enforceable claim of the Asserted Cypress Patents, either literally or under the doctrine of equivalents.

4. On information and belief, Avago has not intentionally, willfully, or deliberately infringed any valid and enforceable claim of the Asserted Cypress Patents, either literally or under the doctrine of equivalents.

THIRD AFFIRMATIVE DEFENSE

(Laches/Waiver/Estoppel)

5. Cypress's claims are barred, in whole or in part, by the doctrines of patent misuse, laches, waiver, and/or estoppel, and/or 35 U.S.C. § 286.

COUNTERCLAIMS FOR DECLARATORY RELIEF

Pursuant to Rule 13 of the Federal Rules of Civil Procedure, Avago alleges the following Counterclaims against Cypress:

THE PARTIES

1. Plaintiff Avago Technologies U.S. Inc. ("Avago-U.S."), is a corporation organized under the laws of Delaware, having a place of business at 350 West Trimble Road, San Jose, California 95131.

2. Plaintiff Avago Technologies ECBU IP (Singapore) Pte. Ltd. ("Avago-ECBU") is a Singapore corporation, having a place of business at 1 Yishun Avenue 7, Singapore 768923.

3. Plaintiff Avago Technologies General IP (Singapore) Pte. Ltd. ("Avago General") is a Singapore corporation, having a place of business at 1 Yishun Avenue 7, Singapore 768923.

4. On information and belief, Defendant Cypress Semiconductor Corporation ("Cypress Corp.") is a corporation organized and existing under the laws of Delaware with a place of business at 198 Champion Court, San Jose, California 95134.

5. On information and belief, Defendant Cypress Semiconductor (Minnesota) Inc. (“Cypress-MN”) is a corporation organized and existing under the laws of Delaware with a place of business at 2401 East 86th Street, Bloomington, Minnesota 55425.

JURISDICTION AND VENUE

6. This is an action arising under the Federal Declaratory Judgment Act and the Patent Laws of the United States, and more particularly, under Title 28 U.S.C. §§ 2201 and 2202, and under the United States Patent Act, 35 U.S.C. §§ 1 *et seq.*

7. Subject to Avago’s affirmative defenses and denials, this Court has subject matter jurisdiction over the subject matter of these Counterclaims under 28 U.S.C. §§ 1331, 1338(a), 2201 and 2202.

8. The Court has personal jurisdiction over Cypress Corp. and Cypress-MN at least by virtue of their incorporation in the State of Delaware.

9. In addition, Cypress Corp. and/or Cypress-MN have purposely availed themselves of this forum by asserting patents in civil actions filed in this judicial district, including in their Counterclaims in this Action, in *Cypress Semiconductor v. Philips Semiconductor, Inc.*, No. 1:01-CV-00178-SLR (March 19, 2001), and *Cypress Semiconductor, et al. v. Integrated Circuit Systems, Inc.*, No. 1:01-CV-00199-SLR (March 28, 2001).

10. Venue for these Counterclaims is proper in this judicial district pursuant to 28 U.S.C. §§ 1391 and 1400 because Cypress filed its Counterclaims against Avago for alleged infringement of the Asserted Cypress Patents in this Court.

11. Cypress’s actions and allegations have created a case or controversy between Avago and Cypress regarding the Counterclaims of Avago set forth below .

FIRST COUNTERCLAIM

(Declaratory Judgment of Non-Infringement)

12. Avago realleges and incorporates by reference Paragraphs 66-152 of its above responses and denials, Paragraphs 1-5 of its above Affirmative Defenses, and Paragraphs 1-11 of its Counterclaims as if fully set forth herein.

13. Cypress has alleged that certain Avago products, including the Avago ADNS-2700 Single Chip USB Optical Mouse Sensor and the Avago ADNS-7530 Single Chip USB Optical Mouse Sensor (collectively, “the Accused Avago Products”), infringe one or more of the Asserted Cypress Patents.

14. The Accused Avago Products do not and have not directly infringed, induced infringement of, or contributed to the infringement of any valid and enforceable claim of the Asserted Cypress Patents, either literally or under the doctrine of equivalents.

15. An actual and justiciable case or controversy exists between Avago and Cypress as to the noninfringement of the Asserted Cypress Patents, as evidenced by Cypress’s Counterclaims and Avago’s Answer to those Counterclaims, set forth above.

16. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. §§ 2201 *et seq.*, Avago requests a declaration of the Court that the Accused Avago Products do not and have not directly infringed, induced infringement of, or contributed to the infringement of any valid and enforceable claim of the Asserted Cypress Patents, either literally or under the doctrine of equivalents.

SECOND COUNTERCLAIM
(Declaratory Judgment of Invalidity)

17. Avago realleges and incorporates by reference Paragraphs 66-152 of its above responses and denials, Paragraphs 1-5 of its above Affirmative Defenses, and Paragraphs 1-11 of its Counterclaims as if fully set forth herein.

18. The claims of the Asserted Cypress Patents are invalid for failing to comply with the provisions of the Patent Laws of the United States, including but not limited to 35 U.S.C. §§ 101, 102, 103 and 112.

19. An actual and justiciable case or controversy exists between Avago and Cypress as to the invalidity of the Asserted Cypress Patents, as evidenced by Cypress's Counterclaims and Avago's Answer to those Counterclaims, set forth above.

20. Pursuant to the Federal Declaratory Judgment Act, 28 U.S.C. §§ 2201 *et seq.*, Avago requests a declaration of the Court that each of the Asserted Cypress Patents are invalid.

PRAYER FOR RELIEF

WHEREFORE, Avago respectfully requests that the Court grant the relief and enter the judgments Avago sought through its Complaint and that the Court further grant the following relief:

- A. A judgment that Cypress's Counterclaims be dismissed with prejudice;
- B. A declaration that Cypress takes nothing by way of its Counterclaims;
- C. A declaration that the claims of the Asserted Cypress Patents are invalid and/or unenforceable against Avago and/or the Accused Avago Products;
- D. A declaration that Avago does not infringe any valid and enforceable claim of the Asserted Cypress Patents;
- E. A declaration that this case is exceptional under 35 U.S.C. § 285 and an award of Avago's attorneys' fees;
- F. An award of Avago's costs and expenses; and
- G. Such other relief as this Court deems just and proper.

JURY DEMAND

Pursuant to Fed. R. Civ. P. 38 and Local Rule 38.1, Avago respectfully requests a jury trial on all issues triable to a jury.

ASHBY & GEDDES

/s/ Lauren E. Maguire

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